

# Health Information Exchange (HIE) Solution from Orion Health for Alaska eHealth Network (AeHN)

## Why Orion Health?

- ✓ Orion Health was founded in 1993, and we have over 10 years experience with HIE solutions worldwide
- ✓ We have over 20 flagship HIE reference sites worldwide, including USA, Canada, New Zealand, Australia, United Kingdom and Europe
- ✓ We have over 200,000 clinicians using our applications, covering the lives of over 35 million patients
- ✓ Our largest live HIE production customer, Alberta Health Services, has over 30,000 clinical users
- ✓ Our Orion Health Rhapsody Integration Engine is already used by three customers in Alaska:
  - South East Alaska Regional Health Consortium (SEARHC)
  - State of Alaska Department of Health
  - Social Services and Central Peninsula General Hospital.
- ✓ Some of our largest customers are from remote geographies similar to Alaska – Maine HealthInfoNet HIE, most Canadian providences (including Alberta, New Brunswick, Saskatchewan, Quebec and the Northwest Territories), Norway and New Zealand.
- ✓ We have previously integrated to all of the common EHR, EMR and ADT and departmental systems in Alaska, including Cerner, Epic, Meditech, Siemens, Healthland, SCC, McKesson, GE Centricity, Greenway and NextGen.
- ✓ Our solution been developed by clinicians for clinicians and includes world-class privacy and security standards for effective health information exchange while still protecting the patient's right to privacy.
- ✓ We are leaders in Public Health. Over 45 USA state public health departments and the CDC use Orion Health technology for messaging and public health reporting.

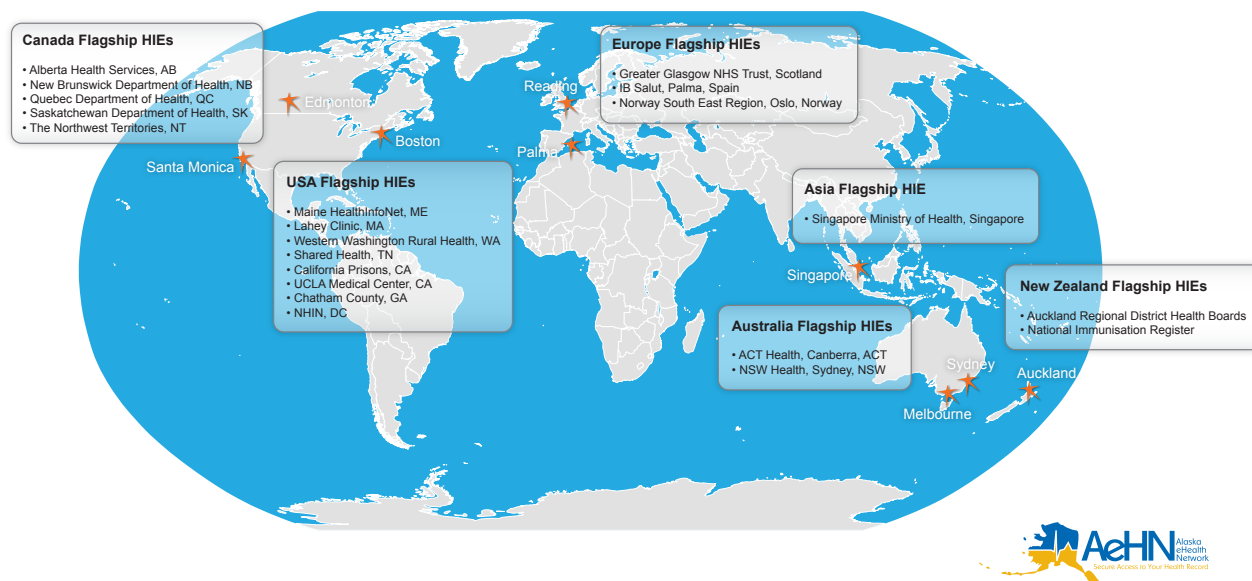
## Benefits

- Proven capabilities and outcomes
- Flexible
- Scalable
- Cost Effective
- Modular approach to implementation
- Easily leverage existing technology
- Standards-based
- Integration to existing EMRs and EHRs

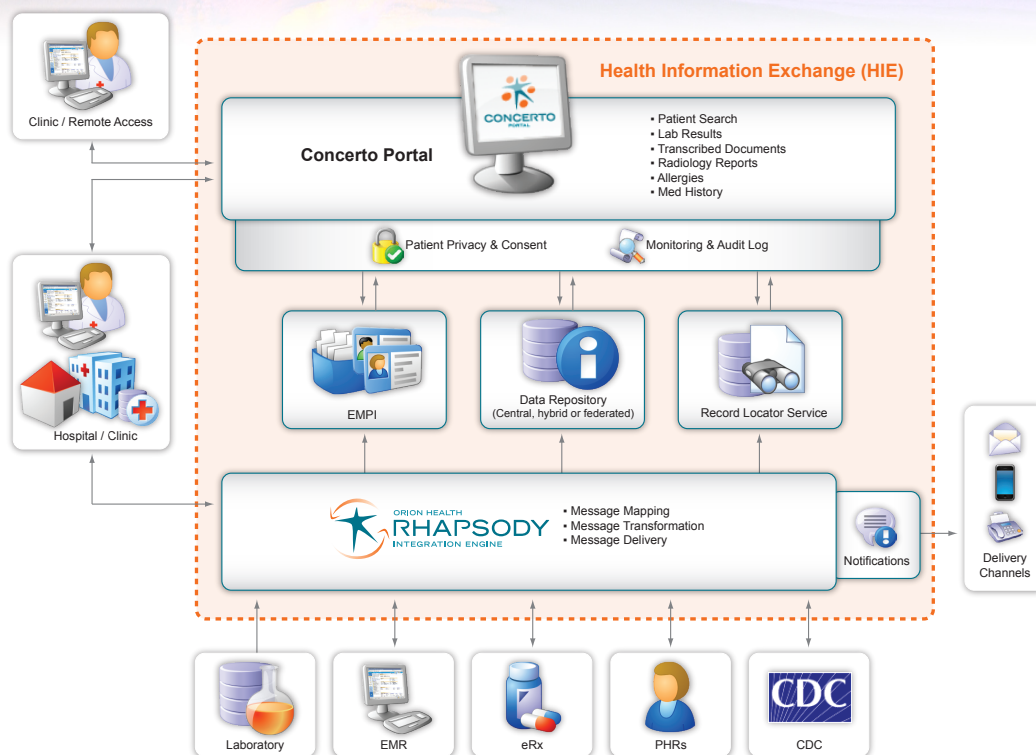
## About Orion Health

Orion Health has over 1,000 customers in 22 countries who use our health integration technology. Worldwide, Orion Health is implementing health information communities involving over 35 million patients with hundreds of thousands of active users. Orion Health supplies health integration software to many leading institutions, including Lahey Clinic, New York State Department of Health, UCLA Medical Center, Shared Health, Alberta Health Services, the State of Maine and U.S. Centers for Disease Control and Prevention (CDC). In the USA over 45 state health departments and over 10 state universities use Orion Health products. In addition, over 400 vendors embed Orion Health tools in their products.

For over ten years, Orion Health has been implementing technology and expertise to deliver successful HIE solutions to nations, states, and healthcare organizations both large and small across the globe.



## The Orion Health HIE Solution

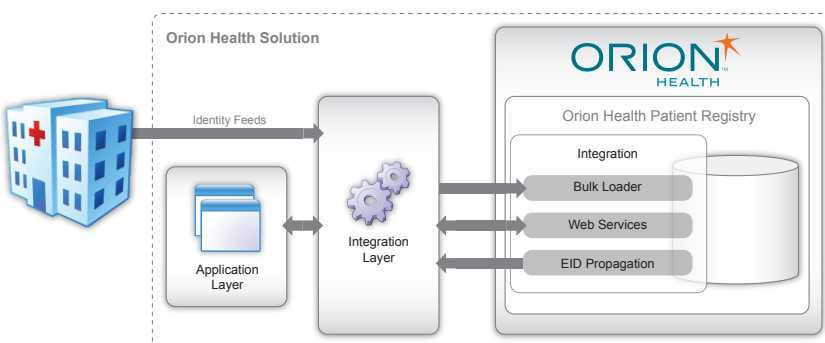


## Key Software Capabilities

### Enterprise Master Patient Index (EMPI)

The Orion Health EMPI solution embeds Initiate Systems Catalyst EMPI application. It delivers a single, trusted and complete version of records in real-time and enables users to obtain a complete and accurate view of all data associated with persons, objects, locations and events.

The Orion Health EMPI is an innovative technology that provides best-of-breed patient reconciliation and search capabilities to overcome consistency, reliability and quality issues typically found in health care communities. The Orion Health EMPI leverages Initiate's leading Master Data Management platform to provide fit for purpose patient registry capabilities and leverages the learnings from over 200 customer implementations to optimize the matching and linking algorithms used for patient identification.



### Health Information Exchange

Orion Health has extensive expertise in the management and deployment of electronic healthcare systems to offer a complete, pre-integrated solution for a single, region-wide Health Information Exchange.

The solution being proposed here has been implemented previously, and is ready to be implemented without extensive on-site integration; saving time, money and resources.

Our solution has been architected to support all prevailing clinical data standards, regulations and modes of working. The systems proposed are deployed in sizable clinical environments, including a number of regional initiatives that utilize the combined solution, demonstrating the technical and clinical scalability of the solution.

The solution pulls data from existing systems and provides a unified view of region-wide health data in a single location. By using standards-based interoperability, the proposed solution means that no changes are required to these existing systems, allowing us to deploy a state-wide solution with minimal disruption to the existing systems and existing clinical process.



## Audit Trail and Reporting

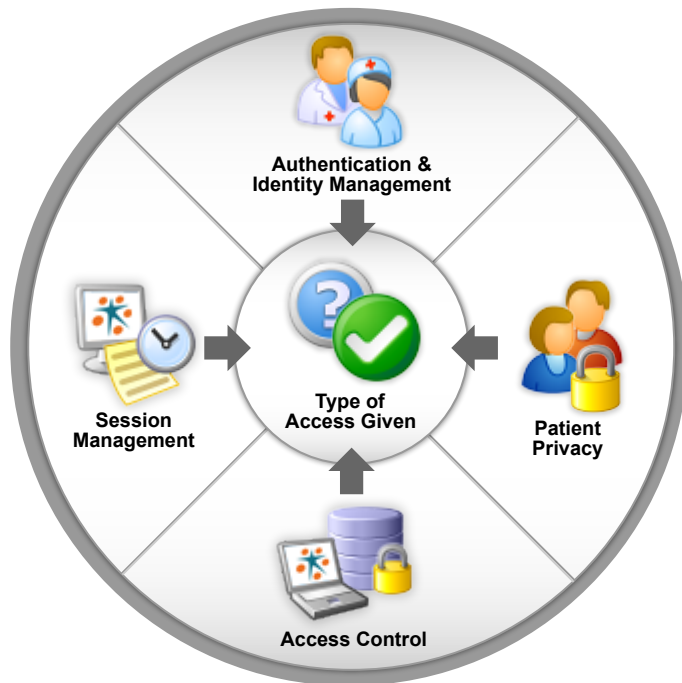
All user activity within the solution is logged, enhancing AeHN's audit capabilities and improving the general security of patient data. Audit trails of user logins, logouts, applications used, security overrides, patient selections and individual documents viewed are recorded, with the date and time. Audit log data is stored in a separate audit database.

Concerto™ records all user activity e.g. login attempts, applications opened, user access to patient data, password and user profile changes, administrative and management functions etc.

Time	User ID	Event Type	Message	Patient ID	Patient Name	ID Type	IP Address
03 Nov 13:39	murdoch	Open Document	Nursing Progress Note	19994-4444	Bowles Edna	Patient Id MRN	
03 Nov 13:39	murdoch	Open Document	Discharge Summary	19994-4444	Bowles Edna	Patient Id MRN	
03 Nov 13:38	murdoch	Open Document	Admission Note	19994-4444	Bowles Edna	Patient Id MRN	
03 Nov 13:38	murdoch	Open Document	Admission Note	19994-4444	Bowles Edna	Patient Id MRN	
02 Nov 11:16	murdoch	Open Document	Chest Xray	GAS1936	Enfield Madge MRS	Patient Id MRN	
02 Nov 10:05	murdoch	Open Document	Chest Xray	GAS1936	Enfield Madge MRS	Patient Id MRN	
30 Oct 15:45	murdoch	Open Document	Mental Health Assessment	84568-4564	Lewis William MR	Patient Id MRN	
30 Oct 15:31	nurse	Open Document	HIV Serology	84568-4564	Lewis William MR	Patient Id MRN	
30 Oct 15:30	nurse	Open Document	Mental Health Assessment	84568-4564	Lewis William MR	Patient Id MRN	
30 Oct 15:24	murdoch	Open Document	Mental Health Assessment	84568-4564	Lewis William	Patient Id MRN	
30 Oct 15:24	murdoch	Open Document	Mental Health Assessment	84568-4564	Lewis William	Patient Id MRN	
30 Oct 14:31	murdoch	Open Document	Thyroid Function	GME1970	Thurby Ivonne	Patient Id MRN	
26 Oct 06:40	murdoch	Open Document	Discharge Summary	GAS1936	Enfield Madge MRS	Patient Id MRN	
26 Oct 06:39	murdoch	Open Document	Discharge Summary	GAS1936	Enfield Madge MRS	Patient Id MRN	

## Privacy Management Function

Concerto™ Portal has been developed by clinicians for clinicians and includes world-class privacy and security standards for effective health information exchange while still protecting the patient's right to privacy.



Access control within Concerto™ is based on the user's role and their membership in one or more user groups. Individual Concerto™ users can be assigned to user groups that determine their level of access to different information systems. For example, clinicians, nurses and administrators would each require different levels of access to patient information. The membership, user privileges and restrictions of these access groups can be fully configured to suit the unique needs of each site.

Concerto™ Clinical Portal enforces patient level consent through the use of configured relationships between the patient and Concerto™ Clinical Portal users, and an authorized administrator configures this within Concerto™ Clinical Portal.

Concerto™ Clinical Portal is able to manage clinician access to sensitive patient information. Every user of Concerto™ Clinical Portal is a member of one or more user groups, these groups control the applications and patient data to which they have access. Users will not be able to access applications to which they do not have access; neither will they be able to view data they are not permitted to see. Patient consent is a central factor in this access control mechanism.

In addition to this, sensitive information (such as HIV status, sexual or mental health episodes) can be masked from the user. Data can be masked at the field level. Masked and locked data is indicated in a way that shows that the data exists, but hides the actual data itself.

## Data Repository Capabilities

The Orion Health Clinical Data Repository (CDR) is a data repository designed specifically for the healthcare industry. It enables the creation and maintenance of a secure, single patient record that can be securely accessed and updated by hospital clinicians and administrators and authorized external parties like primary care providers, insurers, social services agencies and specialist consultants.

The Orion Health CDR can natively display a wide variety of document formats including ADT information, structured laboratory reports, transcribed laboratory reports, transcribed radiology reports, Microbiology reports, and other reports in the following formats (HTML, PDF, .jpeg, .png, .wmv). It can in fact store documents of any type, although it is recommended that formats be restricted to those that can be sensibly displayed by a web browser.

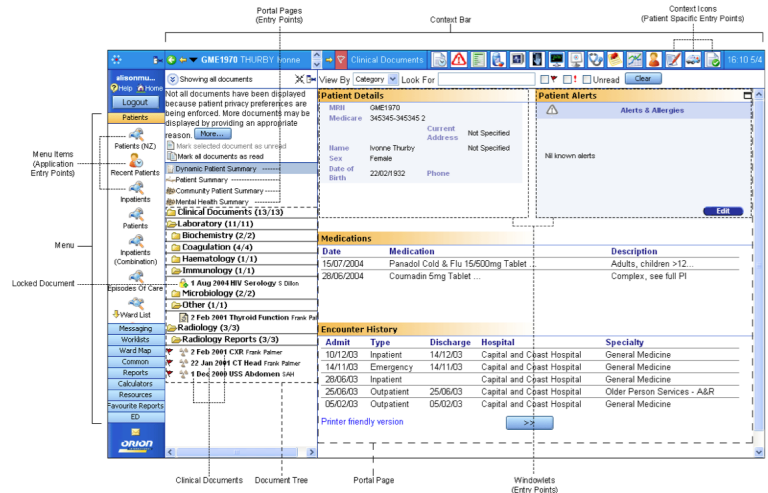
## Composite Record Viewing

Concerto™ Clinical Portal is a browser-based, single sign-on web portal that provides secure access to multiple hospital and community-based information systems, connecting them to provide a “single patient view” of data across all medical applications. Concerto™ Clinical Portal uses powerful web software to collate and display medical data from contemporary, legacy and “best of breed” systems.

Presented in an easy-to-use, intuitive graphical user interface, Concerto™ Clinical Portal is designed to be easy for staff to learn and use. It features a clear and simple graphical environment with a “patient-centric” view of data. For example, once a patient has been selected, the user can access any of that patient's information in just one click.

Examples include:

- Patient demographic information from ADT/HIS systems
- Radiology images and reports, including PACS images
- Laboratory reports
- Outpatient (Ambulatory) and Inpatient (Acute) systems
- Medical document repositories
- Electronic clinical ordering/CPOE
- Hospital/health authority intranets
- Clinician email and calendar
- Transcribed reports and clinical notes
- Clinical guidelines
- Scanned documents
- Mental health
- Scheduling
- Clinical Decision Support

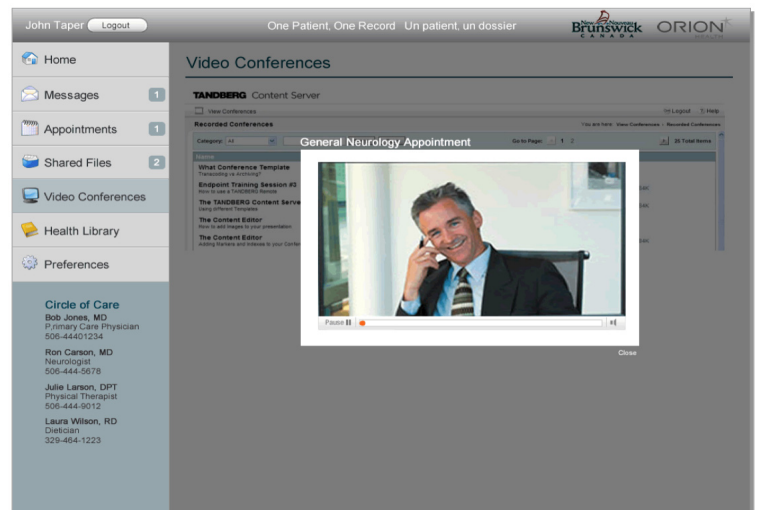


## Personal Health Record

The Concerto™ Portal can be flexibly configured to grant a patient secure access to their own personal health information in the form of a “patient portal”. This Concerto™ Patient Portal presents the patient with a consolidated view of their health information, and may also include other solutions such as clinical messaging/communication, and educational resources.

The Concerto™ Patient Portal is designed to improve the way that patients connect to and communicate with their associated health providers. It provides a secure entry for patients to view shared files about their health as well as a wealth of other information, and provides tools to improve communications. The patient can input certain data, typically in relation to wellness programs (e.g. weight, height, smoking status, device measurements like blood sugar or blood pressure, lifestyle questionnaires etc).

Alternatively, the personal clinical information may be exchanged with another entity such as a PHR using an interoperability standard such as the Continuity of Care Document. By exchanging a CCD message, Orion Health HIE solution can integrate with and support the use of PHRs like Microsoft HealthVault and Google Health as well as and numerous EMR vendors.



## Secure Messaging Service

Notifications and Subscription Management is a key feature of the Orion Health HIE solution that enables real-time alerting in response to information flowing through the HIE.

Users can subscribe to pre-defined events such as a hospital admission and subsequent discharge, or finalized laboratory results available for review using Concerto™ Portal. As messages flow through the HIE, they trigger alerts, messages, or document exchanges delivered to a portal messaging inbox, e-mail account, iPhone, or an EMR system.

The notifications tools improve efficiencies allowing for better clinical outcomes and reducing healthcare costs by ensuring that each provider has access to a comprehensive dataset when treating the patient.

The Concerto™ Clinical Portal user messaging system provides an inbox where a patient or a clinician can manage the messages they receive from other Concerto™ users, as well as notifications delivered to them based on monitoring they have configured against the patient.